



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,075	02/15/2001	James Norbert Caron		3812

7590 11/26/2003

James N. Caron  
205 Indian Spring Drive  
Silver Spring, MD 20901

EXAMINER

COUSO, YON JUNG

ART UNIT	PAPER NUMBER
----------	--------------

2625

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/783,075

**Applicant(s)**

CARON, JAMES NORBERT

**Examiner**

Yon Couso

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

Art Unit: 2625

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yitzhaky et al "Identification of Motion Blur for Blind Image Restoration".

As per claim 1, Yitzhaky teaches a non-iterative method for identifying signal degradation (abstract, lines 10-25) comprising the following steps: applying a transform to the signal, in part or whole, to represent the signal as a frequency spectrum, the frequency having phase information ( $H(u,v)$  in page 2, column 1, lines 20-23).

As per claim 2, Yitzhaky teaches step of discarding the phase information of the frequency spectrum (page 2, column 1, lines 10-16).

As per claim 3, Yitzhaky teaches step of applying a smoothing function (page 2, column 1, lines 17-29).

As per claim 4, Yitzhaky teaches step of applying a smoothing function (page 2, column 1, lines 17-29).

As per claim 6, Yitzhaky teaches the step of using the filter function or inverse transform of the filter function to remove aberrations, improve the quality, or alter the characteristics of the signal (page 2, column 1, lines 26-34).

As per claim 7, Yitzhaky teaches the step of defining the value of the power law to be a constant of frequency, and determining the value of the power law by calculation, estimate or guess (page 4, column 2, line 1).

As per claim 8, Yitzhaky teaches the step of defining the power law to be dependent on frequency, and determining the value of the power law by calculation, estimate or guess (page 4, column 1, lines 4-9).

As per claim 10, Yitzhaky teaches the step includes applying transform to a multi-dimensional image or series images (Yitzhaky teaches 2-dimensional image throughout the disclosure).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yitzhaky et al "Identification of Motion Blur for Blind Image Restoration".

The arguments advanced in paragraph 1 above as to the applicability of the reference are incorporated herein.

As per claim 5, Yitzhaky does not teach details on changing the order in which the claimed steps are performed. However, it is noted from the preceding claims 2 and 4, that the step of discarding the phase information of the frequency spectrum and the step of applying a smoothing function is not specified in any particular order. Yitzhaky discloses the step of applying a transform to the signal, in part or whole, to represent the signal as a frequency spectrum, the frequency having phase information ( $H(u,v)$  in page 2, column 1, lines 20-23), the step of discarding the phase information of the frequency spectrum (page 2, column 1, lines 10-16) and the step of applying a

Art Unit: 2625

smoothing function (page 2, column 1, lines 17-29). Without specifying the order in which each step to be performed, it is not clear what the changing the order may be. Yitzhaky discloses all three steps above and given the reference at the time the invention was made, it would have been obvious to one of ordinary skill in the art to perform smoothing function either before or after the discarding the phase information of the frequency spectrum, lacks any criticality.

As per claims 11 and 12, Yitzhaky does not teach details on using a data processor or a series of electronic circuits to carry out the previously claimed steps since Yitzhaky's reference is mainly directed to the method. However, given the reference at the time the invention was made, it would have been obvious to one of ordinary skill in the art to process the steps taught in Yitzhaky through a data processor or a series of electronic circuits. It is obvious to any one in the art that the steps taught in the Yitzhaky can be implemented in a way of software or hardware, namely by way of a data processor or a series of electronic circuits.

3. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yitzhaky et al "Evaluation of the Blur Parameters from Motion Blurred Images", Adar et al "Restoration of Images Degraded by Mechanical Vibrations", Hirani et al and Wober et al are also cited.

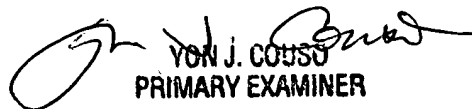
Art Unit: 2625

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779.

The examiner can normally be reached on 8:30 am –5:00 pm from Monday to Friday

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
YON J. COUSO  
PRIMARY EXAMINER

Yjc

November 24, 2003